Linking the Human Resource Management in Education module to knowledge management

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Relevance of and interest in knowledge as critical components of the intellectual discourse have become increasingly evident to the academic community. The world of work has changed which implies that learners should be prepared for occupations requiring higher levels of knowledge and skills. The latter are not only related to the curriculum, but also include the personal qualities required in the transformed work place. The interest in and value of knowledge embedded in human experiences, skills and abilities comprise an emerging discourse known as knowledge management. A problem that comes to the fore is: how can human resource management in the field of education be linked to knowledge management? A clear operational distinction is drawn between information, learning and knowledge. For this article two models of knowledge management are described: knowledge category models and socially constructed models of knowledge management. To link a module in human resource management in education to knowledge management, a brief outline of the module and its three approaches are described. The article concludes with an application of knowledge management to the Human Resource Management in Education module.

Introduction

The information age is already at or past the midpoint of its cycle (Bassi, Cheney, & Lewis, 1998:52; Bassi, 1997:25). This explains the growing interest in knowledge as the new source of competitive advantage, the so-called knowledge era. This interest in and value of knowledge embedded in human experiences, skills and abilities comprise an emerging discourse known as knowledge management (Todd, 1999:11). The recognition of this emergence has made the effective management of knowledge a priority (Rolf & Ron, 1999: 287; De Long & Seeman, 2000:33). According to Bassi (1997:26) and Riley (1998:149), economic forces and globalisation, which are behind effective management of knowledge evolution, are fundamental and likely to continue.

Knowledge management has experienced profound changes in how it defines itself and its outlook on the nature of knowledge (McElroy, 2000:199). There has been a shift in thinking from strategies that focus on dissemination to those that promote education and innovation. In this new approach knowledge management has shed its former preoccupation with information technology. The fundamentally new approach to knowledge management now regards organisational learning as its best companion. The new enlightened view of knowledge management has given itself a new name: second generation knowledge management, which should not be confused with the first generation term, technology-centered heritage. The first generation is all about delivering information to support a task and concerns the individual performance in the field (McElroy, 2000:200). There is no mention of knowledge creation or organisational learning. With the emergence of second-generation thinking, we perceive an application of knowledge management to these issues.

The creation of knowledge through self-reflection and interaction with other people is essentially a human process (Shariq, 1998:11; Bassi, 1997:26). In order to make sense of or to understand, people bring prior knowledge and experience to when interpreting information. Contexts are developed and interpreted during extensive interaction with situations and experiences in practice. As knowledge workers are involved in creating, sharing and diffusing knowledge in the organisation, they are simultaneously involved in the process of changing contexts: their own and that of others in the organisation (O'Connell, 1999:33; Riley, 1998:152; Kinnear & Sutherland, 2000: 106).

Problem statement

The relevance of and interest in 'knowledge' as a critical component of the intellectual discourse has become evident to the academic community (Shariq, 1998:10; Hargreaves, 1999:125; Bassi, 1997:25). They realise that the world of work has changed, which implies that learners should be prepared for work requiring higher levels of knowledge and skills. The latter do not only relate to the curriculum, but also to the personal qualities required in the transformed work place (Hargreaves, 1999:122). These qualities include aspects such as autonomy, self-organising, networking, being innovative, creativity and ability to access sources for skills required to perform a given task (Hargreaves, 1999:122).

The problem that comes to the fore is: How can the Human Resource Management in Education module be linked to knowledge management? To address this question it is important to pay attention to the Human Resource Management in Education module and to the 'knowledge management' approach.

What is knowledge?

With the growth in information technology, a clear operational distinction can be drawn between information and knowledge (Rolf & Ron, 1999:288; McElroy, 2000:199; Riley, 1998:146; Bassi, 1997:145; Todd, 1999:11). Information may be described as data, stimuli and representations that exist in the external environment and are potentially available to be converted and utilised in some way (O'Connell, 1999:33). Information is not viewed as knowledge until it has been processed in the human mind through a process known as learning (Martensson, 2000:213; Todd, 1999:12). Learning therefore leads to knowledge, which is either tacit or explicit. Explicit knowledge is similar to information and can be stored outside the human mind, for example, in a data base (Martensson, 2000:213; Hargreaves, 1999:127; Todd, 1999:12; Rowley, 1999:418). Tacit knowledge on the other hand is oral and may be regarded as internalised and subjective and cannot be shared electronically (Rowley, 1999:418; Rowley, 2000a:327). Consequently tacit knowledge realises when people have transformed information personally through a learning process into their personal knowledge store and created new knowledge in the organisation (Todd, 1999:11; Shariq, 1998:11; O'Connell, 1999:33; Martensson, 2000:208; Rowley, 2000b:9). The acquired knowledge then supports and informs decisions, behaviour and actions (Rowley, 2000b:9). The final stage is the feedback from those actions which may lead to further information and which forms the basis for further learning. Figure 1 depicts how information, learning and knowledge are linked.

Knowledge creation starts with people sharing their internal, tacit knowledge by socialising with other people or by obtaining it in digital or analogue form (Martensson, 2000:209; Riley, 1998:148; Bassi, 1997:25). The shared knowledge is then further disseminated by other people which creates new knowledge. This newly created knowledge is again shared with others and the process begins again (Bassi, 1997:26). It has no use if organisations have people with intellectual capital who do not share it, or if knowledge is not effectively managed (Katz, 1998:50; Riley, 1998:148; 149).

What is knowledge management?

Knowledge management is regarded as an integrated approach to identify, manage, share and capitalise on the know-how, experience

Information ⟶ Learning ⟶ Knowledge ⟶ Decisions Actions Behaviour
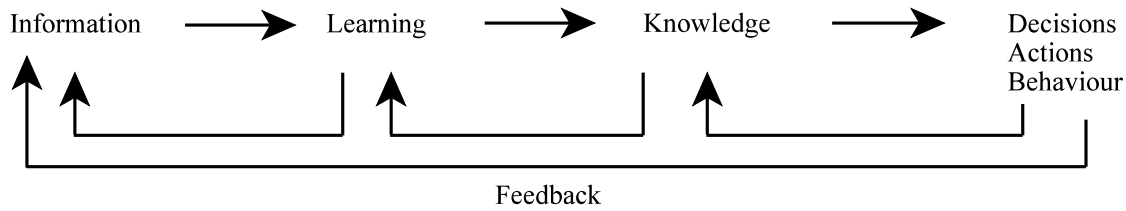
Feedback

Figure 1 Linking information, learning and knowledge (Rowley, 2000b:9)

and intellectual capital of people in an organisation (Todd, 1999:12; Martensson, 2000:205; Riley, 1998:149; McKenna, 2000:333). By managing knowledge, organisations can improve their efficiency, allow professionals to learn more efficiently and effectively, provide a better foundation for making decisions, improve communication between staff members and enhance the synergy between staff members (Roelof, 1999:95; O'Connell, 1999:33). It is assumed that most people possess a great wealth of tacit knowledge that needs to be shared in the organisation (Bagshaw, 2000:180; O'Connell, 1999:33; Hong & Kuo, 1999:208). Organisations adopting knowledge management focus on translating this tacit knowledge into explicit knowledge and ensure that individual knowledge becomes organisational knowledge in order to improve organisational performance (Martensson, 2000:214; Hicks, 2000: 71; Shockley, 2000:57; Hargreaves, 1999:126; Rossett, 1999:64; Todd, 1999:12).

The core of the knowledge management process is the instruments with which learning is stimulated and knowledge is managed (Roelof, 1999:104). This process, depicted in Figure 2, consists of four basic steps. People collect the information they need in order to perform their daily tasks, use the knowledge to create value, learn from what they create and finally, feed this knowledge back into the system for others to use (Bukowitz & Williams, 1999:9; O'Connell, 1999:33).
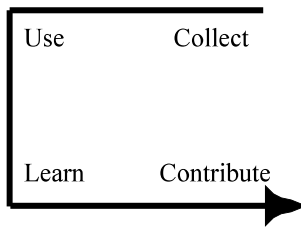
Use   Collect

Learn   Contribute

Figure 2 The process of knowledge management

Knowledge management is a concept that has also become common language in business education over the past decade (Keong, Willett & Yap, 2001:268). This implies that an educational institution develops a capacity among its staff members to be at the forefront of knowledge and skills in learning and teaching and the support of learning. This will be dealt with later.

To understand the phenomenon of knowledge management more clearly, different models have been developed.

Models of knowledge management
Two different models of knowledge management are distinguished: Knowledge category models and socially constructed models of knowledge management which are briefly outlined in the next two sections.

Knowledge category models
Nonaka and Takeuchi (1995:58) view knowledge management as a knowledge creation process, as depicted in Figure 3. This shows that knowledge is thought to consist of tacit and explicit elements (McAdam & McGreedy, 1999:95; Hargreaves, 1999:127). The instruments of knowledge management are categorised according to the kind of

	TO	
	TACIT	EXPLICIT
TACIT	**Socialisation** Mentoring, training, exchange of ideas	**Externalisation** Dialogue, reflection among staff
EXPLICIT	**Internalisation** Learning-by-doing	**Combination** Education, training, meetings

FROM

Figure 3 Nonaka's knowledge management model (Nonaka & Takeuchi, 1999:62)

interaction between tacit and explicit knowledge, i.e. socialisation, externalisation, combination and internalisation (Bassi *et al.,* 1998:54; Roelof, 1999:100). *Socialisation* refers to the exchange of experience whereby personal knowledge is created in the form of mental models, such as mentoring, training and the exchange of ideas which generate tacit knowledge (Roelof, 1999:100; Hargreaves, 1999:127; Rossett, 1999:64). In *externalisation* tacit knowledge is made explicit by means of dialogue and collective reflection among staff members (Hargreaves, 1999:127; Roelof, 1999:100; Riley, 1998:152). *Combination* is the kind of knowledge creation usually found in education and training which can be regarded as powerful tools to transfer knowledge (Roelof, 1999:100; Robinson & Ellis, 1999:28; Bassi, 1997:29). Knowledge is also combined through meetings, documents and networking when people exchange knowledge (Hargreaves, 1999:127; Rossett, 1999:64). In *internalisation* explicit knowledge becomes tacit knowledge through learning-by-doing, although documented knowledge can also play a role in this process (Roelof, 1999:100; Hargreaves, 1999:127). By sharing experiences and learning by doing under the supervision of the mentor or facilitator, the trainee acquires professional knowledge (internalisation) (Hargreaves, 1999:132).

Socially constructed models of knowledge management
Socially constructed models of knowledge management view knowledge as intrinsically linked with the social and learning processes in the organisation (Rowley, 2000b:8; McAdam & McGreedy, 1999:98; Rossett, 1999:65). McAdam and McGreedy (1999:98) developed a model based on Demerest's model, which focuses on the construction of knowledge including the social construction of knowledge in an organisation (McAdam & McGreedy, 1999:98). The model identifies four phases of knowledge management in the organisation: knowledge construction, knowledge dissemination, knowledge use and knowledge embodiment (Rowley, 2000b:11). The constructed knowledge is embodied in the organisation through both explicit programmes and a process of social interchange (McAdam & McGreedy, 1999:98; Rowley, 2000b:11). A process of dissemination of the espoused knowledge then follows throughout the organisation. Finally, the knowledge is seen as useful to both staff members and the organisation. The solid arrows in Figure 4 show the primary flow direction whilst the open arrows show the more recursive flows. According to McAdam and McGreedy (1999:98), it is clear from the model that knowledge man-

agement is not a simple sequential process, as indicated in Figure 1.

For knowledge management to be successful it is necessary to understand how people learn, how they implement what they learn and how they share their knowledge (Bassi, 1997:30). The module, Human Resource Management in Education (HMR), serves as an example to explain this phenomenon.
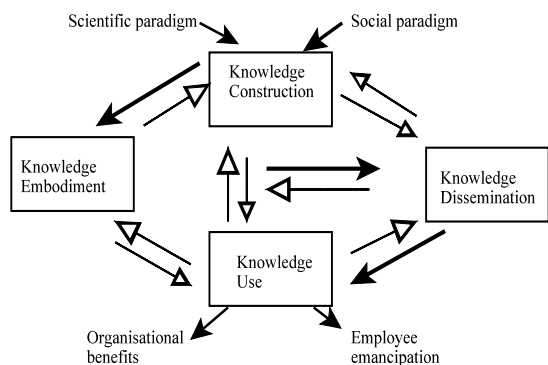

Figure 4 A modified version of Demerest's knowledge management model (McAdam & McGreedy, 1999:98)

The case of the module: human resource management in education

Human Resource Management in Education (HMR) is one of the five modules which comprise the learning programme for a Master's degree in Educational Management. Offered through distance education, the module is scheduled for one year, at the end of which learners write an examination. Five study guides cover the main topics of the module. These are augmented by a number of academic articles. The study guides use 'guided didactic conversation' which enhances critical thinking and reinforces reflective learning processes (Guri-Rozenblit, 1990:76). When studying the material, learners actively discover their own meaning by being involved in 'doing things' and thinking about their actions (Leder, 1993:12; Bonwell & Eison in Hobson 1996:45).

The Master's programme in Human Resource Management in Education has been designed to provide educational managers with the following knowledge and skills (*cf.* Monks & Walsh, 2001:151):

• Advanced theoretical and analytical knowledge and skills to diagnose, facilitate and implement changes related to human resource management within their schools/organisations;

• An increased self-awareness and capacity for problem-solving in the organisation using Total Quality Management tools and techniques.

The two assessment forms for the two compulsory assignments also include a reflection on learners' involvement in each assignment. The idea is to promote self-critical reflection. In one assignment learners are required to supply a self-assessment mark and to comment on it (*cf.* Zuber-Skerrit, 1995:42). The mark and its justification are considered by the educator who then determines the final mark.

Implied in these assignments are the teaching and learning approaches to the module.

Approaches to teaching and learning in the module

Three approaches can be distinguished in the approach to teaching and learning in the module; empowering learners, critical reflection and constructivism.

Empowering learners

The traditional view of empowerment is accepted by this module whereby responsibility for learning is shifted to the learners themselves (Glasman, 1997:88). The central goal of creating empowering environments is to facilitate learning (Glasman, 1997:95).

The lecturers involved in the postgraduate programme view themselves as facilitators of the learning process. The programme also focuses on learners' self-development where learners take responsibility for their own learning. Table 1 summarises the two different paradigms of teaching. The 'new' paradigm in particular played a key role in the design of the module. Table 2 focuses on the outcomes set for the module (*cf.* Smith, 2000:240).

Table 1 Paradigm of teaching (Smith, 2000:240)

	Traditional	New
Knowledge	Transferred from educator to learner	Jointly constructed by educator and learner
Learners	'Passive vessel' to be filled by the educator's knowledge	Active constructor, discoverer, transformer of knowledge
Context	Competitive, individualistic	Cooperative learning in workplace
Assumptions	Any expert can teach	Teaching is complex and requires considerable education and training
Requirements	Facts Individual effort Passing an examination Achieving a mark	Problem-solving Team skills Learning how to learn Continuous improvement

Table 2 Outcomes of the Master's in HRM programme (*cf.* Monks & Walsh, 2001:153)

Problem-solving	Personal development	Knowledge	Interpersonal skills
Ability to empathise Ability to generate alternatives and produce many solutions	Increase confidence Decision-making skills Analytical skills Self-evaluation	Updated on latest trends in HRM	Team-working Learning with and through others Listening skills

Critical reflection

Critical thinking involves more than cognitive activities, such as logical reasoning (Van Aswegen, 1998:53). It means justifying the rationality of ideas and actions (Van Aswegen, 1998:53). Critical thinking also has a reflective dimension which is a process of making a new or revised interpretation of the meaning of an experience. Reflection involves critical analysis and interpretation of an experience, the review of past values in relation to the changed perspective and the examination of the implications for future action (Van Aswegen, 1998:98). This then guides subsequent understanding, appreciation and action. Densten and Gray (2001:5) regard critical reflection as the core of management development.

The main aim of employing reflection in the module is to maximise individual potential by allowing learners to evaluate the meaningfulness of their experiences from a management perspective (*cf.* Densten & Gray, 2001:1). Without reflection managers may not be convinced by their past successes and fail to consider other viewpoints which may be crucial for the organisation's prosperity (Densten & Gray, 2001:2). As educators we realise that education management theories only make sense through practice, but practice makes sense only through reflection (Densten & Gray, 2001:3). Reflection also enhances learner empowerment where learners take an active role in the construction of meaning (Densten & Gray, 2001:5). This module provides ample opportunities for learner reflection so that learners gain understanding of how they perceive and interpret their partici-

pation and observations (Densten & Gray, 2001:2). An emphasis on self-awareness throughout the module helps learners become cognizant of their own strengths and areas for development. By integrating and applying knowledge and skills in the assignment questions, links between theory and practice were achieved.

Constructivism

Constructivism as an educational approach comprises the integration of new ideas with previous experiences and tries to change existing structures by allowing learners to explore and discover new alternatives (Densten & Gray, 2001:2). The constructivist approach has the possibility of empowering learners to take responsibility for their own learning (Densten & Gray, 2001:3). It enhances learner empowerment where learners take an active role in the construction of meaning (Densten & Gray, 2001:5). Unfortunately learners are often ignorant of the practical knowledge that exists among themselves. The module provides ample opportunities for learners to tap that knowledge and share it with others in the school (organisation). For example, learners have to explore particular problems in areas of Human Resource Management in their schools/institutions. With the assistance of staff, solutions should be offered and in the case of Assignment 2 implemented in practice.

In the light of this brief background to the module, it is now possible to link it to knowledge management.

Human resource management and knowledge management

Many management programmes have been criticised for being too theoretical and not transferable to everyday practice (Zuber-Skerrit, 1995:36; Cascio, 2001:6). In the module, Human Resource Management, an attempt has been made to base learning firmly in practice. Furthermore, in this module it is assumed that practising managers have a wealth of experience, knowledge and skills which can be built on. It is also assumed that while knowledge can be gained from instructional material, it can also be obtained from the theory learners develop from their practice (*cf.* Zuber-Skerrit, 1995:39).

The Human Resource Management module demonstrates the educational shift from knowledge transmission to the facilitation of integrated workplace learning, which is a shift in the paradigm from training to the formation of management knowledge, skills and attitudes and an organisational culture of continuous learning and development (Zuber-Skerrit, 1995:38; Bassi *et al.,* 1998:56). This module is designed to promote learning at both individual and organisational level (*cf.* Zuber-Skerrit, 1995:38). It is work-integrated, learner-centred, problem-focused and based on adult learning principles. It is directed at both organisational development and the personal and professional development of educational managers who can upgrade their knowledge and skills and exchange their experience and ideas with team members.

Two distinctive principles of knowledge management are indicative of the underlying theory implemented in the module (*cf.* Keong *et al.,* 2001:269). One is the nature of knowledge management as an approach to management that encourages creativity (Martensson, 2000:213; Allee, 1997:71). The other principle involves the 'connection' of those who know and those who need to know, thus converting personal knowledge into organisational knowledge. The activities in the module are designed to promote creativity, critical thinking and communication and problem-solving skills (*cf.* Keong *et al.,* 2001: 272).

Knowledge creation in the module shows some resemblance to Nonaka and Takeuchi (1995:58) instruments of knowledge management, which are socialisation, externalisation, combination and internalisation (Bassi *et al.*, 1998:54; Roelof, 1999:100). When completing activities, learners first have to explain an activity to colleagues by providing appropriate knowledge for the sake of their understanding (socialisation). In externalisation tacit knowledge is made explicit by means of appropriate models and tools, eg by providing and discussing the different appraisal forms in Assignment 01 and by applying the

quality tools in Assignment 02. Knowledge is combined through meetings and team work when people exchange knowledge as was required in activities (Combination). When the action plan in Assignment 02 is implemented explicit knowledge becomes tacit knowledge through learning-by-doing. By sharing experiences and learning by doing under the supervision of the facilitator (in this case learner in the module), the staff member acquires professional knowledge (internalisation).

McAdam and McGreedy's model (1999:98) of social construction is also relevant for the module. The four phases of knowledge management: knowledge construction, knowledge dissemination, knowledge use and knowledge embodiment are clearly illustrated in the learning process. Learners are required to first construct their own knowledge with the assistance of the guidance provided. They develop new skills, create new insights and exchange their views and experiences in regular meetings scheduled between the team members. The knowledge is therefore disseminated to team members during the completion of the assignment activities. This knowledge then becomes of use for the organisation when learners learn to solve organisational problems which are significant not only to themselves but also to the organisation (*cf.* Zuber-Skerrit, 1995:42). This then leads to knowledge embodiment when the constructed knowledge is embodied in the organisation through both explicit programmes and a process of social interchange (McAdam & McGreedy, 1999:98; Rowley, 2000b:11).

Conclusion

A major aim of knowledge management is to establish a positive learning environment in which people can conduct all sorts of learning activities and share knowledge with other people in the organisation (Bukowitz & Williams, 1999:2; Hong & Kuo, 1999:215; Martensson, 2000:214). Different learning activities as set out in the assignments in the module, Human Resource Management in Education, serve different sharing functions and it is important to master each sharing function in order to enhance the performance of knowledge management. The focus of assignments on real problems in schools/institutions meant that learners experienced the completion of assignments as extremely significant and relevant as both individuals and as staff members of a school/organisation (*cf.* Monks & Walsh, 2001:153). The structure and processes established in the module reflect its commitment to educational practice as well as the theory and principles of knowledge management (*cf.* Keong *et al.,* 2001:274). Furthermore, learning in this module is regarded as a function of the interaction of people and not only a possession of an individual (*cf.* Bryans & Smith, 2000:235).

The more traditional approach to teaching regards learning as a process of acquisition and accumulation in contrast to some recent views that suggest learning as a purposive, self-managed, critical or creative process (*cf.* Monks & Walsh, 2001:151). In the latter case the learner becomes an active participant in world-making rather than an interpreter thereof. The educators involved in teaching the module are also committed to the notion of the educator as facilitator, as the challenger of the manager's (learner's) view of the world and as a co-learner (Monks & Walsh, 2001:155). This article serves as an example where learners are actively involved in their own learning.

Employing a knowledge management philosophy is challenging because it is necessary to understand and manage the relationship between knowledge and the social contexts that shape knowledge (Stromquist & Samoff, 2000: 323; Rowley, 2000b:14). This requires a careful consideration of the characteristics of knowledge and the strategy to manage such knowledge for the benefit of the individual and the organisation.

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